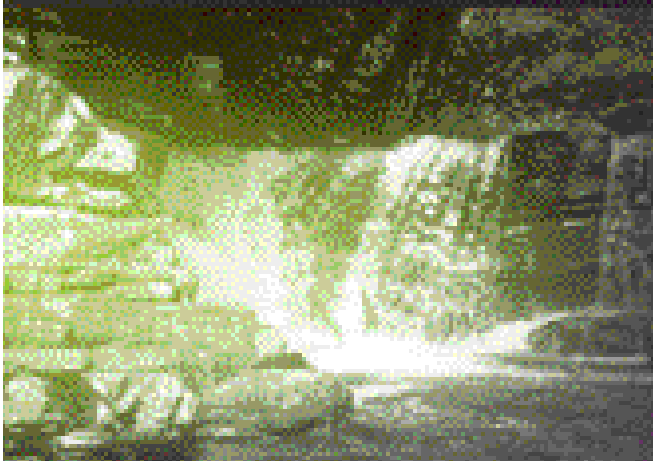
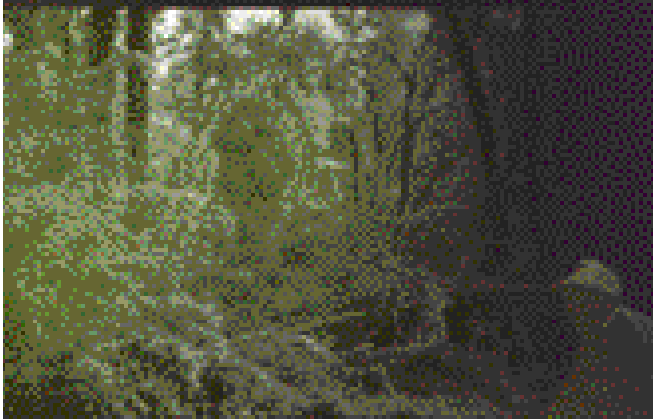
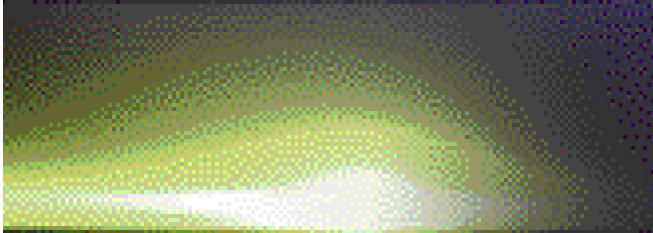


# BELIZE

facing the  
climate  
change



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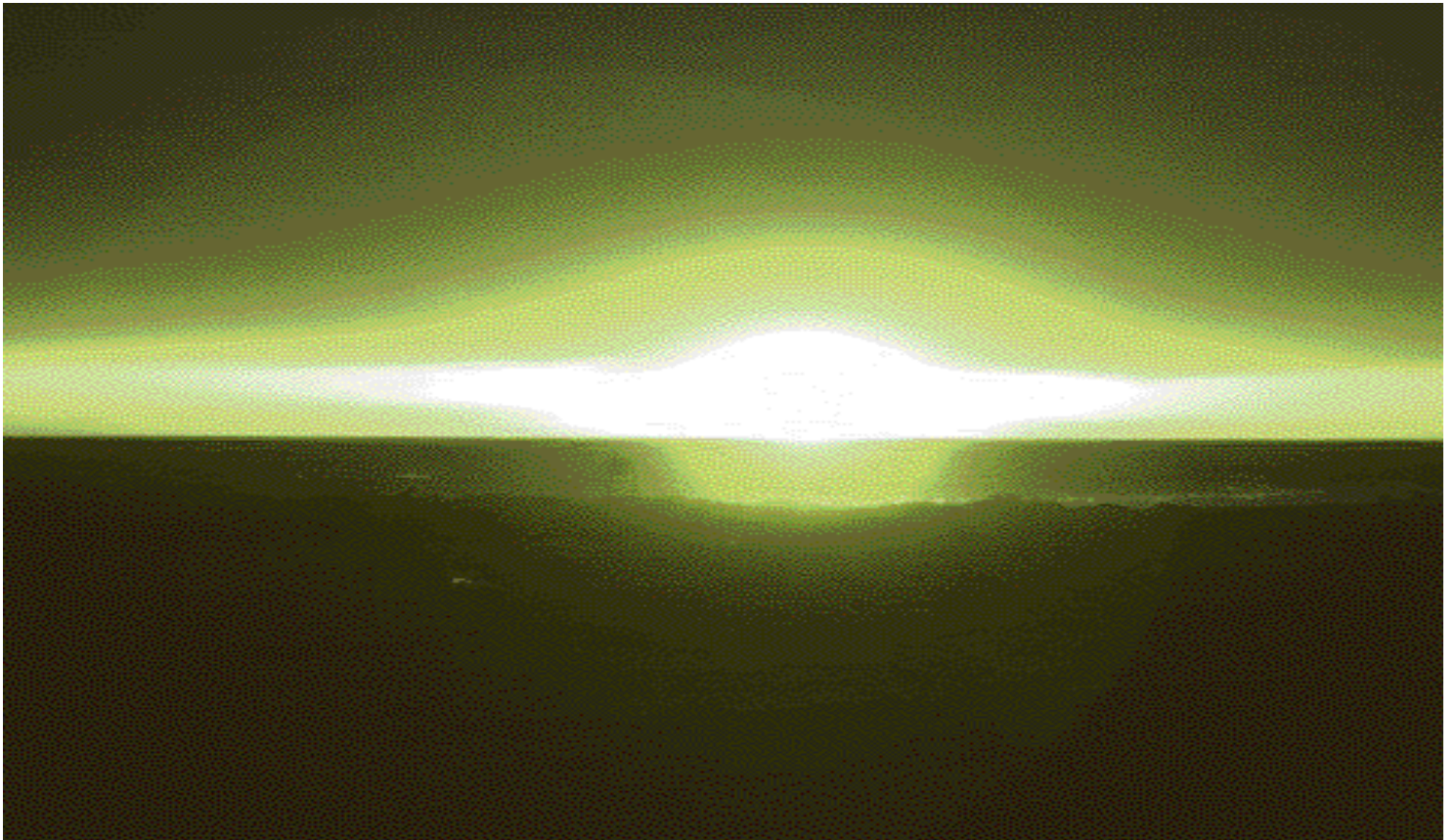
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The denominations used in this publication and the way that the data it contains is presented, do not imply that the Food and Agriculture Organization of the United Nations, has expressed any judgement whatsoever regarding the judicial condition of countries, territories, cities or zones, or of its authorities, or regarding the delimitation of its frontiers or limits.

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## Preface

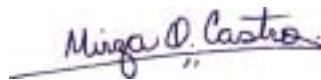
Central America continues preparing for the implementation of concrete actions to mitigate climate change, particularly forestry activities within the guidelines of the Clean Development Mechanism (CDM), under the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC).

This preparation has been galvanized thanks to a process launched through the Forest and Climate Change in Central America Project (PBCC, for its acronym in Spanish). Jointly sponsored by FAO and the Government of The Netherlands, the project has been implemented in coordination with the Central American Commission on Environment and Development (CCAD.)

The countries participating are Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. The products of the project's many activities have been supervised at the national

level by the respective Focal Points, with collaboration and guidance from the National Technical Committees bringing together experts from forestry agencies, academia, the private sector and civil society.

In this Central American Series on *Forest and Climate Change*, the PBCC presents an assessment of mitigation potential and the legal and institutional framework in each of the seven countries of Central America. It also includes a regional document on the overall situation in Central America within the scenario of the Clean Development Mechanism. These documents are key instruments for national positioning with respect to afforestation and reforestation activities for mitigation of climate change. They provide scientific information and institutional and legal analyses, useful not only for decision makers, but also for the academic sector and others interested in the theme of climate change and in CDM.



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## Foreword

# A SERIES FOR CENTRAL AMERICA

The problem of climate change is one of the most serious humanity has ever faced, and one that humans themselves have generated, placing all planetary life in jeopardy. Reducing the emission of contaminating gases that heat up the atmosphere and destroy the ozone layer through the use of clean technologies and taking many of these gases off the market is one part of the solution. The other part is to absorb a large quantity of these gases through forests and plantations whose trees clean the air we breathe.

Central America's redoubts of tropical forest and forest plantations are an important part of these global "cleaners," but the region's potential also lies in land where more trees can be planted or where forests can regenerate naturally, enhancing their capacity to mitigate greenhouse gases. These are the so-called "Kyoto forests," where countries can develop afforestation and reforestation projects with support from the financing system generated by the Clean Development Mechanism (CDM) created by the Kyoto Protocol and the United Nations Framework Convention on Climate Change (CMCC). The CDM permits developed nations, which generate the gases, to pay developing nations for their mitigation services. Funding can be negotiated through projects presented to different "stock exchanges," or initiatives being created to finance "CDM projects."

Central America represents around 8% of the world CDM market. This privileged position is derived from the net potential of carbon from future plantations, the implementation of agroforestry systems and induced regeneration of forests, making it possible to produce around 243 million tons of carbon (24.3 million tons a year) in the next decade. The area potentially available for mitigation projects in Central America is over two and a half million hectares (2,625,212 ha.)

The "*Forests and Climate Change in Central America Project*" (PBCC, for its acronym in Spanish) was created to help Central American countries develop all of this

mitigation potential and take advantage of opportunities offered by the Clean Development Mechanism.

The PBCC began by assessing just how prepared Central America is to participate in CDM, the legal and institutional framework related to climate change in each country and how much this facilitates effective participation in the world carbon market. It also calculated potential for mitigating emissions of greenhouse gases in the region and in each country—in other words, how much land is available and where to carry out afforestation and reforestation projects with CDM funding. Top-notch consultants in each country were put in charge of making these studies, and to better weigh all these aspects, they interviewed members of the National Technical Committees and other key actors in the forestry and climate change sector in each of the countries. We would now like to share the results of those studies with you.

This is the reason for producing the "Central American Series on Forest and Climate Change," consisting of eight publications. Seven of them, one per country, describe the legal and institutional situation and mitigation potential at the national level. The eighth presents consolidated information at the regional level, with an overall look at Central America from the perspective of CDM.

The idea is to provide information useful for technicians, decision makers and institutions in the Central American forestry sector, encouraging and guiding them in the design of successful projects eligible for CDM. It is also aimed at fostering the changes necessary to improve the legal and institutional framework in Central America with respect to climate change. More forestry development and a responsible attitude toward climate change will result in better quality of life for the Central American population, especially in the rural area.

## Introduction

# BELIZE IN THE SCENARIO OF CLIMATE CHANGE

Recent extreme natural events occurring in the Central American region have shown us that the climate truly is changing, just as scientists have been saying for several years. One of the effects being talked about is the increase in planetary temperature causing the polar ice cap to melt, with a subsequent rise in sea level that will affect lowlands and islands. Greater and lesser precipitation is also projected, caused by extreme events such as hurricanes in certain seasons, and droughts in others.

There is certainty now about the reasons for this climate change: basically, intensive use of energy derived from fossil fuels and conversion of forests to cropland and other uses. Fossil fuels release gases causing what is called the greenhouse effect. The most important of these is carbon, which converts to carbon dioxide through oxidation.

Despite the possible gravity of this situation, nations have been slow to reach agreements about corrective measures, mostly because this signifies changes in habits and needs that directly affect their economies and social patterns. Among the few commitments made, it was not until the year 2001 when nations reaffirmed an agreement to put into effect the Kyoto Protocol, promoted since 1997. Practices for mitigating climate change are recognized in this agreement, and one of the mechanisms refers to the forest theme and change in land use. The Clean Development Mechanism (CDM) for developing countries was thus established in the framework of the Kyoto Protocol, whose entry into force was planned for 2003.

### Foundations in Belize

One of the main challenges Belize faces is developing the appropriate policies and institutional framework to regulate and expedite the implementation of CDM projects at the national level. To date, national institutional structures are not yet operating in Belize. The conception of this national institutional structure must be in line with the country's developmental priorities and sustainable development policies.

One of the requisites for participating in the CDM is the establishment of a national authority whose main role is to coordinate the actions of the various players whose work impacts on national CDM projects.

Furthermore, national laws may need to be updated to reflect the realities of carbon trading. Special attention needs to be paid to the regulations, currently very weak, in the areas of land use and forestry, the two topics that will be critical to management of CDM projects in Belize.

While subject to resource constraints, Belize has always tried to participate actively, and it was thus that the nation drafted its National Report to the World Summit on Sustainable Development, in 2002. It also submitted the first and second National Communication to the United Nations Convention to Combat Desertification (UNCCD).

### Experience in mitigation

Belize has not yet hosted a project under the CDM and indeed has not yet fully accomplished the steps necessary for complete ratification of the Kyoto Protocol.

However, In 1992 Belize signed the United Nations Framework Convention on Climate Change (UNFCCC) and ratified it two years later in 1994. In 1997 the country became a signatory to the Kyoto Protocol and subsequently ratified the agreement in 2001. Although endorsed by the Government of Belize, the necessary papers have yet to be filed with the Executive Board of the CDM. Until such procedures are carried out, the country will not be officially eligible to benefit under the arrangements set out in the Kyoto Protocol.

To date, Belize still does not have a national office on climate change, and the functions of the United Nations Framework Convention on Climate Change (UNFCCC) are thus headquartered at the offices of the National Meteorological Service.

Likewise, the country has prepared an inventory of its anthropogenic output of greenhouse gases (GHG) as part of its national commitment under the Convention on Climate Change. The 1994 inventory shows that Belize is a net remover of GHG from the atmosphere, sequestering twice as much greenhouse gas as was released into the atmosphere. The main sectors in Belize to monitor, mitigate and adapt for reduced GHG emissions are the land use and forestry sector, followed by waste management and energy

### Potential in Belize

Belize could trade almost 600,000 tons of carbon in the international market, according to the study on estimated carbon sequestration potential conducted by the Forest and Climate Change in Central America Project.

This number is obtained by subtracting the Baseline (376,928 tons), which corresponds to the carbon sequestration produced without any Clean Development Mechanism (CDM) project, from the total carbon benefits of the national forest sector (1,854,078 tons). The 1,477,151-ton difference corresponds to the extra carbon credits generated by interventions geared specifically to achieve that purpose (additionality).

However, a certain percentage must be deducted to take adjustments, re-emission and risk into account. Regarding the adjustment for re-emission, the project assumes a rough average of one half the net carbon value bringing the net carbon storage value down to 738,576 tons of carbon (50% of 1,477,151 tons). In relation to the risk factors, this project uses a generic figure of 20% as the discount to apply to the national total carbon potential (20% of 738,576 tons). When this value is applied, the national total is further reduced to 590,861 tons of carbon. This is the final potential for mitigation in Belize.

The research also identified a total of 182,478,000 hectares in Belize qualifying as Kyoto Areas and appropriate for CDM projects.

### International framework for climate change

The *United Nations Framework Convention on Climate Change (FCCC)* is the primary legally binding international instrument addressing the theme of climate change. It was open for signature at the Rio Summit (1992), with 155 countries signing on that occasion.

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is “to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

The FCCC has three main principles: the precautionary principle, common but differentiated responsibilities (with leadership for combating climate change assigned to industrialized States) and contribution to sustainable development. The general commitments applied to both developed and developing nations are established in Article 4.1 of the Convention. Chief among these are to develop, periodically update, and publish national inventories of emissions and sinks of all greenhouse gases, as well as national and/or regional programs of mitigation and adaptation to the effects derived from climate change.

The commitment of the United Nations Conference on Environment and Development (Rio 92) to stabilize GHG emissions to 1990 levels by the year 2000 did not meet with the success expected, which is why the *Kyoto Protocol (PK)* was adopted and approved at the COP3 in 1995 in Japan. The protocol is a new version of obligations with respect to the FCCC and creates a true “demand for carbon” on the part of the industrialized countries by establishing the goal of obtaining concrete emission reductions of 5% for the 2008-2012



quinquennium with respect to 1990 levels. In fact, all of the actions carried out as of 2000 will be recognized in this compliance period.

The Kyoto Protocol incorporates several flexible mechanisms for achieving net reductions of GHG emissions. These are: Emissions Trading, Joint Implementation, Activities Implemented Jointly and the Clean Development Mechanism. The most interesting of these for the forestry activities of tropical countries is the CDM. This mechanism, covered in Article 12 of the Protocol, will make it possible for countries to carry out and invest in the reduction or prevention of GHG emissions in the developing world. The purpose of the CDM is to support the sustainable development of developing countries and contribute to the primordial objective of the FCCC, as well as helping countries included in Annex 1 comply with their commitments on quantified emission limitation.

Through the CDM, industrialized countries will be able to acquire Certified Emission Reduction units (CERs), CTOs (*Certified Tradable Offsets*) or Certified Trade Credits. In exchange for these investments, they will receive carbon credits that can be traded or deducted from their own emissions. These investments also establish an international market for certified emission reductions.

The CERs are financial instruments for international trading in GHGs and are expressed in equivalent units of carbon (metric tons) that have been and will be reduced or offset. Through the issuance of CERs, countries with limitation commitments pledge to maintain the validity of the mitigation until 2020, ensuring additional compensation if certification discrepancies are verified.

During the COP6-2 (*Bonn, Germany*) many of the major points of conflict between countries were resolved and the global community manifested its intention to ratify the Kyoto Protocol at the end of 2002. The agreement consolidated a flexible framework with no restrictions on participation in CDM projects, and included forestry

projects for carbon sequestration limited to afforestation and reforestation.

At the COP7, held in *Marrakech*, Morocco, in November 2001, the general decisions made at the COP6-2 in Bonn were formalized and the necessary foundations were laid for general ratification of the protocol. The Parties focused their efforts on developing compliance guidelines, standards, modalities and implementation guides for CDM; on Emissions Trading and on Joint Implementation.

One of the most important features of the COP7 and one that will contribute to clarifying the rules of the game in this area was the establishment of the Executive Board that will supervise the CDM under the authority of the Conference of Parties of the Kyoto Protocol. The functions of the Executive Board will include formulation of recommendations on new CDM modalities and procedures, approval of new methodologies related to the baseline, supervision plans and the spheres of the projects. It will also be responsible for accreditation of operational entities and for placing pertinent information at the public's disposal.

Elsewhere, the Kyoto Protocol recognizes activities of sequestration or reduction of carbon emissions associated with *land use, land-use changes and forestry activities (LULUCF)*, as one of the options existing to regulate human-induced emissions of greenhouse gases.

These projects and activities are contemplated in Articles 3.3 and 3.4 of the Kyoto Protocol, which mention that the countries in Annex 1 should take afforestation, reforestation and deforestation into consideration, along with other LULUCF activities, in reporting their emissions and emission reductions. A LULUCF project is an array of activities in a given geographical location, implemented to reduce or sequester GHGs through afforestation and reforestation and other ways framed within land use, land-use changes and silviculture.

As a result of the Kyoto Protocol, several funds have been created at the international level to support CDM and other projects. These are bilateral and multilateral initiatives arising in developed countries that must reduce their emissions. In the case of greenhouse gas mitigation, there are at least six funds to finance CDM projects within the framework of the Kyoto Protocol and a seventh option offered by the United States Government, but outside the Protocol.

The World Bank now has three initiatives: the Carbon Prototype Fund, the Bio Carbon Fund and the Community Development Carbon Fund. The Netherlands offers two financing possibilities:

Carboncredits.nl and The Netherlands Carbon Facility (INCaF), which is channeled through the International Finance Corporation (IFC). Finland also has its Clean Development Program. The United States' Climate Change Initiative is separate from the Kyoto Protocol.

The world thus has different political and financial mechanisms to begin addressing climate change. In this scenario, each Central American country must compete efficiently, create its own conditions for generating projects and attract investments allowing the country to take maximum advantage of its potential for mitigating climate change.